

CLAIMS

1. An electric compressor comprising:

5 a single-phase induction motor formed of a stator and a rotor;
a compressing mechanism driven by the motor; and
a hermetic container for accommodating the motor and the
compressing mechanism and for pooling lubricant,

wherein the compressing mechanism includes:

10 a shaft having a main shaft and a sub-shaft;
a cylinder for forming a compressing chamber; and
a bearing for supporting the main shaft,

wherein the shaft includes:

a centrifugal pump opening into the lubricant;
a forward leading groove engraved on an outer wall of the
15 main shaft, and having a first end communicating with the centrifugal pump
and a second end communicating with an annular lubricant groove provided on
an upper end of the bearing;

a reverse leading groove having a lead directing in an
opposite direction to that of the forward leading groove, a first end
20 communicating with the centrifugal pump, and a second end directly opening to
the annular lubricant groove; and

a vertical hole bored in the sub-shaft and having a first
end communicating with the annular lubricant groove, and a second end
opening into the hermetic container.

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2. The electric compressor of claim 1, wherein the reverse leading
groove of which first end communicates with the centrifugal pump via a thinner

section formed at an intermediate section of the shaft.

3. The electric compressor of claim 1 or 2, wherein a cross sectional area of the reverse leading groove is smaller than that of the forward leading groove.

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4. The electric compressor of claim 1 or 2, wherein a lead of the reverse leading groove is greater than that of the forward leading groove.

5. The electric compressor of claim 1, wherein the vertical hole slants
10 with respect to a shaft center of the main shaft such that an upper section of the vertical hole slants outward.